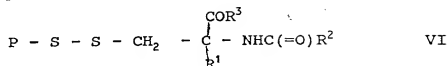


WHAT IS CLAIMED IS:

1. A compound of general formula VI



in which P is selected from the group consisting of peptides, proteins and oligonucleotides; R¹ is hydrogen, lower alkyl or aryl; R² is a lipid-containing moiety comprising a lipid group; and R³ is -OH, a lipid-containing moiety comprising a lipid group or an amino acid chain comprising one or 2 amino acids and terminating in -CO₂H or -COR².

2. A compound according to claim 1, wherein R¹ is hydrogen, R² is a lipid group and R³ is -OH.

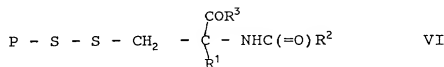
3. A compound according to claim 1, wherein R¹ is hydrogen, R² is -CH₂CH₂CH(NH₂)CO₂H or -CH₂CH₂CH(NHCO-lipid)CO-lipid and R³ is -NHCH₂CO₂H or -NHCH₂CO-lipid in which at least one of R² and R³ comprises a lipid group.

4. A compound according to claim 1, wherein said lipid group is a hydrophobic substituent comprising about 4 to about 26 carbon atoms.

5. A compound according to claim 4, wherein said lipid group is a hydrophobic substituent comprising about 5 to about 19 carbon atoms.

6. A method for increasing absorption of a sulfhydryl-group containing compound selected from the group consisting of peptides, proteins and oligonucleotides into mammalian cells, said method comprising:

forming from the sulfhydryl-containing compound a compound of general formula VI



in which P is a moiety derived from the sulfhydryl-group containing compound selected from the group consisting of peptides, proteins and oligonucleotides; R¹ is hydrogen, lower alkyl or aryl; R² is a lipid-containing moiety; and R³ is -OH, a lipid-containing moiety or an amino acid chain comprising one or 2

amino acids and terminating in $-\text{CO}_2\text{H}$ or $-\text{COR}^2$; and

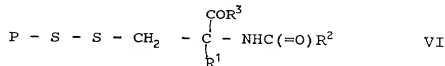
administering the compound of general formula VI to the cells.

7. A method according to claim 6, wherein R^1 is hydrogen, R^2 is a lipid group and R^3 is $-\text{OH}$.

8. A method according to claim 6, wherein R^1 is hydrogen, R^2 is $-\text{CH}_2\text{CH}_2\text{CH}(\text{NH}_2)\text{CO}_2\text{H}$ or $-\text{CH}_2\text{CH}_2\text{CH}(\text{NHCO-lipid})\text{CO-lipid}$ and R^3 is $-\text{NHCH}_2\text{CO}_2\text{H}$ or $-\text{NHCH}_2\text{CO-lipid}$ in which at least one of R^2 and R^3 comprises a lipid group.

9. A method for prolonging blood and tissue retention of a sulfhydryl-group containing compound selected from the group consisting of peptides, proteins and oligonucleotides into mammalian cells, said method comprising:

forming from the sulfhydryl-containing compound a compound of general formula VI



in which P is selected from the group consisting of peptides, proteins and oligonucleotides; R^1 is hydrogen, lower alkyl or aryl; R^2 is a lipid-containing moiety; and R^3 is $-\text{OH}$, a lipid-containing moiety or an amino acid chain comprising one or 2 amino acids and terminating in $-\text{CO}_2\text{H}$ or $-\text{COR}^2$; and administering the compound of general formula VI to the cells.

10. A method according to claim 9, wherein R^1 is hydrogen, R^2 is a lipid group and R^3 is $-\text{OH}$.

11. A method according to claim 9, wherein R^1 is hydrogen, R^2 is $-\text{CH}_2\text{CH}_2\text{CH}(\text{NH}_2)\text{CO}_2\text{H}$ or $-\text{CH}_2\text{CH}_2\text{CH}(\text{NHCO-lipid})\text{CO-lipid}$ and R^3 is $-\text{NHCH}_2\text{CO}_2\text{H}$ or $-\text{NHCH}_2\text{CO-lipid}$ in which at least one of R^2 and R^3 comprises a lipid group.

12. A compound of general formula V



in which A is an aromatic activating residue; R^1 is hydrogen, lower alkyl or aryl; R^2 is a lipid-containing moiety comprising a lipid group; and R^3 is $-\text{OH}$, a lipid-containing moiety comprising a lipid group or an amino acid chain comprising

one or 2 amino acids and terminating in $-\text{CO}_2\text{H}$ or $-\text{COR}^2$.

13. A compound according to claim 12, wherein A is 2-pyridyl or 4-nitrophenyl.

14. A compound according to claim 12, wherein R^1 is hydrogen, R^2 is a lipid group and R^3 is $-\text{OH}$.

15. A compound according to claim 12, wherein R^1 is hydrogen, R^2 is $-\text{CH}_2\text{CH}_2\text{CH}(\text{NH}_2)\text{CO}_2\text{H}$ or $-\text{CH}_2\text{CH}_2\text{CH}(\text{NHCO-lipid})\text{CO-lipid}$ and R^3 is $-\text{NHCH}_2\text{CO}_2\text{H}$ or $-\text{NHCH}_2\text{CO-lipid}$ in which at least one of R^2 and R^3 comprises a lipid group.

16. A method for a forming a compound of general formula VI, comprising: reacting a compound of general formula PSH, in which P is selected from the group consisting of peptides, proteins and oligonucleotides, with a compound of general formula V



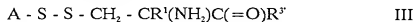
in which A is an aromatic activating residue; R^1 is hydrogen, lower alkyl or aryl; R^2 is a lipid-containing moiety comprising a lipid group; and R^3 is $-\text{OH}$, a lipid-containing moiety comprising a lipid group or an amino acid chain comprising one or 2 amino acids and terminating in $-\text{CO}_2\text{H}$ or $-\text{COR}^2$.

17. A method according to claim 16, wherein A is 2-pyridyl or 4-nitrophenyl.

18. A method according to claim 16, wherein R^1 is hydrogen, R^2 is a lipid group and R^3 is $-\text{OH}$.

19. A method according to claim 16, wherein R^1 is hydrogen, R^2 is $-\text{CH}_2\text{CH}_2\text{CH}(\text{NH}_2)\text{CO}_2\text{H}$ or $-\text{CH}_2\text{CH}_2\text{CH}(\text{NHCO-lipid})\text{CO-lipid}$ and R^3 is $-\text{NHCH}_2\text{CO}_2\text{H}$ or $-\text{NHCH}_2\text{CO-lipid}$ in which at least one of R^2 and R^3 comprises a lipid group.

20. A compound of general formula III



in which R^3 is $-\text{OH}$ or an amino acid chain comprising one or two amino acids and terminating in $-\text{CO}_2\text{H}$; A is an aromatic activating residue; and R^1 is hydrogen, lower alkyl or aryl.

21. A compound according to claim 20, wherein R^1 is hydrogen and R^3 is -
OH.
22. A compound according to claim 20, wherein R^1 is hydrogen and R^3 is -
 $NHCH_2CO_2H$.